10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

NEK6 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8077a

Product Information

Application	WB, E
Primary Accession	Q9HC98
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	35714
Antigen Region	8-39

Additional Information

Gene ID	10783
Other Names	Serine/threonine-protein kinase Nek6, Never in mitosis A-related kinase 6, NimA-related protein kinase 6, Protein kinase SID6-1512, NEK6
Target/Specificity	This NEK6 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 8-39 amino acids from the N-terminal region of human NEK6.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NEK6 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NEK6 (HGNC:7749)
Function	Protein kinase which plays an important role in mitotic cell cycle progression (PubMed:11516946, PubMed:14563848). Required for chromosome segregation at metaphase-anaphase transition, robust mitotic spindle formation and cytokinesis (PubMed:19414596). Phosphorylates ATF4, CIR1, PTN, RAD26L, RBBP6, RPS7, RPS6KB1, TRIP4, STAT3 and histones H1 and

	H3 (PubMed:12054534, PubMed:20873783). Phosphorylates KIF11 to promote mitotic spindle formation (PubMed:19001501). Involved in G2/M phase cell cycle arrest induced by DNA damage (PubMed:18728393). Inhibition of activity results in apoptosis. May contribute to tumorigenesis by suppressing p53/TP53-induced cancer cell senescence (PubMed:21099361). Phosphorylates EML4 at 'Ser-144', promoting its dissociation from microtubules during mitosis which is required for efficient chromosome congression (PubMed:31409757).
Cellular Location	Cytoplasm. Nucleus. Nucleus speckle. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole. Note=Colocalizes with APBB1 at the nuclear speckles. Colocalizes with PIN1 in the nucleus. Colocalizes with ATF4, CIR1, ARHGAP33, ANKRA2, CDC42, NEK9, RAD26L, RBBP6, RPS7, TRIP4, RELB and PHF1 in the centrosome. Localizes to spindle microtubules in metaphase and anaphase and to the midbody during cytokinesis
Tissue Location	Ubiquitous, with highest expression in heart and skeletal muscle.

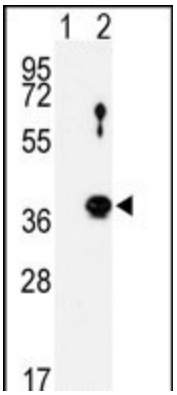
Background

NEK6 is a serine/threonine kinase that controls initiation of mitosis. NEK6 is activated during M phase. It is required for chromosome segregation at metaphase-anaphase transition and therefore for mitotic progression. Inhibition of activity results in apoptosis.

References

Belham, C., et al., J. Biol. Chem. 278(37):34897-34909 (2003). Lizcano, J.M., et al., J. Biol. Chem. 277(31):27839-27849 (2002). Hashimoto, Y., et al., Biochem. Biophys. Res. Commun. 293(2):753-758 (2002). Li, M.Z., et al., Cytogenet. Cell Genet. 87 (3-4), 271-272 (1999).

Images



Western blot analysis of NEK6 (arrow) using rabbit polyclonal NEK6 Antibody (N-term)(Cat.#AP8077a).293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the NEK6 gene (Lane 2) (Origene Technologies).

Citations

- Integrative approach for differentially overexpressed genes in gastric cancer by combining large-scale gene expression profiling and network analysis.